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Art Unit: 2854

APPENDIX

A copy of proposed claim amendments and comments sent to the Examiner by facsimile in preparation for the Telephone Interview conducted with the Examiner by the undersigned on March 4, 2005 is attached after this page.

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U.S.S.N.: 09/923,250 – Filed August 3, 2001

Claim Amendment Proposal For Response to Final Office Action

1. (Proposed Amendment) A system for air embossing a surface of an embossable fabric comprising:

a cylindrical stencil having an inside surface and a fabric-facing surface;

an air lance comprising a conduit and at least one nozzle, wherein the nozzle is configured and positioned with respect to the inside surface of the stencil so that it is able to emit a stream of a gas supplied to the air lance such that the gas is directed to pass through openings in the stencil and, when the system is in operation, impinge upon the surface of the embossable fabric, the stream of gas having sufficient velocity and collimation to create visible embossed depressions in the surface of the fabric in a pattern corresponding to a pattern of the openings in the stencil, and wherein the nozzle is positioned so that a minimum distance separating the nozzle from an inner surface of the stencil is less than a minimum distance separating the nozzle from a longitudinal central axis of the conduit; and

at least one stencil stabilizer constructed and positioned to apply a force to the stencil during operation of the system ~~sufficient~~ to reduce variations in a distance separating the embossable surface of the fabric and a portion of the fabric-facing surface of the stencil directly adjacent thereto during rotation of the stencil, wherein the stabilizer is constructed and positioned so that at least a portion of the stencil stabilizer is separated from the longitudinal central axis of the conduit by a minimum distance exceeding the minimum distance separating the nozzle from the longitudinal central axis of the conduit.

Comments: (Incorporates limitations from allowed claim 30 identified in previous Office Action as distinguishing cited art without requiring that stabilizer be part of/connected to air lance as with claim 30 (e.g. covers Applicant's Figs: 10a-10b embodiment too).

2. (Unchanged)
3. (Unchanged)
4. (Unchanged)
5. (Unchanged)

6. (Unchanged)
7. (Previously Canceled)
8. (Unchanged)
9. (Unchanged)
10. (Unchanged)
11. (Unchanged)

12. (Proposed Amendment) The system of claim 10, wherein at least a portion of the stencil stabilizer is positioned at a zero separation distance in contact with the inner surface of the stencil and wherein a distance separating the nozzle from the inner surface of the stencil is equal to or exceeds the zero separation distance.

13. (Unchanged)
14. (Unchanged)
15. (Unchanged)
16. (Unchanged)
17. (Unchanged)
18. (Unchanged)
19. (Unchanged)
20. (Unchanged)
21. (Unchanged)
22. (Unchanged)
23. (Unchanged)
24. (Unchanged)

25. (To be Cancelled) ~~A system for air embossing a surface of an embossable fabric comprising:
—— a cylindrical stencil having an inner surface and a fabric-facing surface; and
—— an air lance including at least one nozzle thereon, the nozzle being constructed and positioned with respect to the inner surface of the stencil such that it is able to emit a stream of a gas through openings in the stencil and onto the embossable surface of the fabric with sufficient~~

~~velocity and collimation to create a pattern of visible embossed depressions in the surface of the fabric corresponding to a pattern of the openings in the stencil;
the nozzle being positioned so that at least a portion thereof is in contact with the inner surface of the stencil when the system is in operation.~~

26. (To be Cancelled)

27. (To be Cancelled)

28. (To be Cancelled)

29. (To be Cancelled)

30. (Unchanged) An air lance for directing a gas through a rotating stencil and onto a surface of an embossable fabric for air embossing the fabric comprising:

a conduit having at least one inlet opening therein;

at least one orifice, in fluid communication with the conduit, forming at least one nozzle, the nozzle being constructed and positioned to direct a stream of the gas through the stencil and onto the embossable surface of the fabric and the nozzle being positioned so that a minimum distance separating the nozzle from an inner surface of the stencil is less than a minimum distance separating the nozzle from a longitudinal central axis of the conduit, when the air lance is in operation; and

at least one stencil stabilizer connected to and extending from the conduit, the stabilizer being constructed and positioned to contact an inner surface of the stencil during operation of the system, said contact creating a force on the inner surface that is sufficient to reduce variations in a distance separating the embossable surface of the fabric and a portion of a fabric-facing surface of the stencil directly adjacent thereto during rotation of the stencil, the stabilizer being further constructed and positioned so that a portion of the stencil stabilizer that extends farthest away from the conduit, is separated from the longitudinal central axis of the conduit by a minimum distance exceeding the minimum distance separating the nozzle from the longitudinal central axis of the conduit.

31. (Unchanged)

- 32. (Unchanged)
- 33. (Unchanged)
- 34. (Unchanged)
- 35. (Unchanged)
- 36. (Unchanged)

37. (To be Cancelled) ~~A system comprising: means for air embossing an embossable fabric by directing a stream of gas through at least one opening in a rotating cylindrical stencil and onto an embossable surface of the fabric; and means for reducing variations in a distance separating the embossable surface of the fabric and a portion of a fabric facing surface of the stencil directly adjacent thereto during rotation of the stencil.~~

- 38. (Withdrawn - To be Cancelled)
- 39. (Withdrawn - To be Cancelled)
- 40. (Withdrawn - To be Cancelled)
- 41. (Withdrawn - To be Cancelled)
- 42. (Withdrawn - To be Cancelled)
- 43. (Withdrawn - To be Cancelled)
- 44. (Withdrawn - To be Cancelled)

45. (To be Cancelled) ~~A system for air embossing a fabric comprising:
—— a cylindrical stencil with a plurality of openings formed therein;
—— means for rotating the stencil about a rotational axis that is parallel to or co-linear with the longitudinal axis of the stencil;
—— means for supporting a fabric having an embossable surface for movement in a direction forming a non-zero angle with respect to the longitudinal axis of said stencil;
—— means for directing a gas from within the cylindrical stencil through the openings and towards the embossable surface with sufficient collimation and velocity to emboss the fabric with visible embossed depressions in a pattern corresponding to a pattern of the plurality of openings formed in the stencil; and~~

~~at least one stencil stabilizer constructed and positioned to engage an inner surface of the cylindrical stencil to reduce variations in a distance separating the means for supporting the fabric and a portion of an outer surface of the stencil directly adjacent to the embossable surface of the fabric as the stencil rotates.~~

46. (Proposed Amendment) A system for air embossing a surface of an embossable fabric comprising:

- a cylindrical stencil having an inside surface and a fabric-facing surface;
- an air lance comprising at least one nozzle and connectable in fluid communication with a source of a gas and disposed within the cylindrical stencil, when the system is in operation; and
- at least one stencil stabilizer constructed and positioned to apply a force to the stencil during operation of the system so as to distort the cross-sectional shape of the stencil into a non-circular shape and to maintain said non-circular shape during rotation of the stencil to thereby reduce variations in a distance separating the embossable surface of the fabric and a portion of the fabric-facing surface of the stencil directly adjacent thereto during rotation of the stencil.

Comments: (Clarifies that configuration of stabilizer that creates distortion of stencil into an out-of-round shape functions to reduce variations and effect stabilization. Mitter teaches that his stabilizer (element (2)) is configured to do exactly the opposite (i.e. maintain a circular shape under all conditions so as to stabilize – see, e.g. col. 2, lines 10-17; col. 4, lines 30-34; col. 11, lines 57-61; and col. 12, lines 9-12).

47. (Proposed Amendment) A system for air embossing a surface of an embossable fabric comprising:

- a cylindrical stencil having an inside surface and a fabric-facing surface;
- an air lance comprising at least one nozzle and connectable in fluid communication with a source of a gas and disposed within the cylindrical stencil, when the system is in operation; and
- at least one stencil stabilizer constructed and positioned to apply a force to the stencil during operation of the system ~~sufficient~~ to reduce variations in a distance separating the embossable surface of the fabric and a portion of the fabric-facing surface of the stencil directly adjacent thereto during rotation of the stencil;

wherein the at least one stencil stabilizer is constructed and positioned so that at least a portion thereof is in essentially continuous contact with a surface of the stencil during the entirety of its rotation.

Comments: (Adds air lance to describe a complete and operative air embossing system according to embodiments illustrated in Applicant's specification. Mitter continually stresses that his stabilizer is configured to not continuously contact stencil during operation to prevent frictional damage to the stencil (see e.g. col. 2, lines 24-31 and col. 4, lines 40-48). The only elements disclosed/shown as contacting screen in Mitter are not stabilizers but applicators for spreading fluent material onto screen – e.g. flexible squeegees 3''' of Fig. 11, 3a' of Fig. 13, and 3a'' of Fig. 14. These elements are not described by Mitter as serving any screen stabilization function or having any such capacity (c.f. the squeegees are elastic and flexible) – indeed, any speculative possible effect they might have had on stencil stabilization had Mitter's stencil stabilizer 2 been omitted is nullified and negated by the presence of stencil stabilizer 2 of Mitter, which is specifically designed to prevent the type of out-of-round distortion they may otherwise tend to cause.)

48. (To be cancelled) ~~A system for air embossing a surface of an embossable fabric comprising:~~
~~—— a cylindrical stencil having an inside surface and a fabric-facing surface;~~
~~—— an air lance comprising at least one nozzle and connected in fluid communication with a source of a gas;~~
~~—— a stream of the gas emitted from the at least one nozzle and passing through openings in the stencil, the stream of the gas being directed so as to impinge upon the surface of the embossable fabric, when the system is in operation, the stream of the gas having sufficient velocity to, upon impact with the surface of the embossable fabric, create visible embossed depressions in the surface of the fabric in a pattern corresponding to a pattern of the openings in the stencil; and~~
~~—— at least one stencil stabilizer constructed and positioned to apply a force to the stencil during operation of the system sufficient to reduce variations in a distance separating the embossable surface of the fabric and a portion of the fabric-facing surface of the stencil directly adjacent thereto during rotation of the stencil.~~

49. (To be cancelled) ~~A system for air embossing a surface of an embossable fabric comprising:~~
~~—— a cylindrical stencil having an inner surface and a fabric facing surface;~~
~~—— an air lance including at least one nozzle thereon and connected in fluid communication with a source of gas;~~
~~—— a stream of gas emitted from the at least one nozzle and passing through openings in the stencil, the stream of the gas being directed so as to impinge upon the embossable surface of the fabric, when the system is in operation, the stream of gas having sufficient velocity to, upon impact with the embossable surface of the fabric, create visible embossed depressions in the surface of the fabric in a pattern corresponding to a pattern of the openings in the stencil, with~~
~~—— the nozzle being positioned so that at least a portion thereof is in contact with the inner surface of the stencil when the system is in operation.~~

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